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ABSTRACT

The report surveys the occupational environment of the towns in the region within 30 to 45 minutes' commuting time of North Reading, Massachusetts. A random sample of manufacturing, wholesale and retail trade, service, and to a much lesser extent finance, insurance, real estate establishments was surveyed in person or by mail. Information regarding responsibilities, training, prospects of change in job qualifications, employment prospects, and aptitudes, interests, and temperaments is presented in tabular form and discussed for the following entry level occupations in the business and office, and marketing and distribution career clusters: bookkeeper, clerk-typist, legal secretary, personnel clerk. receptionist, secretary, sales clerk, customer service specialist, bank teller, general sales person, and real estate sales person. Cross tabulations of the survey data analyzing occupational and employment information by town and by type of establishment are presented. Also included are discussions of in-house training programs, highlights of the project, personal observations made during the project, and recommendations for education agencies and cooperative business education. Appended are a personnel agency survey, standard industrial classification codes, statistical tables related to employment by industrial classification, businesses surveyed, and occupational definitions. (JR)

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ED107878

Regional Assessment and Participative Evaluation

FINAL REPORT

FEDERALLY FUNDED RESEARCH PROJECT

SUMMER 1974

PR – 18

NORTH READING HIGH SCHOOL

NORTH READING, MASS. 01864

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TABLE OF CONTENTS

Part		Pages
Preface		
I	Introduction	1– 4
II	Background	5–10
III	Industrial Structure of the Region	11–14
IV	Validation Instrument	15–58
V	Statistical Information	59–69
VI	"In House" Training Programs	70–72
VII	Highlights	73–74
VIII	Observations	75–78
Appendix		79–90
Footnotes		91

Preface

The objective of the Research Report entitled Regional Assessment and Participative Evaluation has been to " wet a finger for wind direction." By researching the Occupational Community, a better understanding of what direction to follow for occupational competency has developed.

During the conception of this research and planning grant, it was our argument that how can we as occupational education personnel adequately prepare young entrants into the world of work, if we ourselves do not have as complete an understanding as possible of the occupational community around us. It was also by design to include as many other Local Education Agencies as possible, and thus begin to establish the first collaborative effort in our Region for the occupational competency of high school students.

As the competition increases for each entry level position, so does the need for each student to be given the opportunity to develop a saleable skill while still in high school. It is the PHILOSOPHY of this project that anyone leaving education should have the basic skills to qualify him or her for a place in the world of work.

This Research Project for Occupational Competency is not an independent endeavor, nor as we feel it should be. Project CAREER, located in Randolph, Massachusetts, has been a major part of our program and the use of their data and the collective expertise of Vincent P. Lamo, Roger Ritch and John Post have been of immeasurable value to our project. Dr. Thomas Henstock, associated with Northeastern University has provided the consultant expertise in the fields of Sample Selection, Survey Development, as well as Organized Statistical Reporting. Miss Charlotte Meisner, Chief Supervisor of the Occupational/Industry Research Department of the Massachusetts Division of Employment Security, has provided more resource information than imaginable. Miss Meisner's ability to direct our Labor and Industry investigation in the most efficient manner has been of the uppermost assistance.

Also, we would like to thank Mr. Clifford Reed of the Division of Occupational Education, Massachusetts Department of Education, for his guidance and availability for technical assistance.

Our thoughts of appreciation are extended to those representatives of the major inudstries of the region. Without their collective cooperation, the search could not have been conducted. It was really amazing how involved the various representatives wanted to become in the education of high school students. Industry as a whole wants to provide that which they can to help those young entrants into the world of work. Educators would be remiss not to seek the expertise of those leaders in the business world.

Our special appreciation to our secretary, Keiren Smith, for the many hours she has given to the Project beyond the " call of duty " and making it a team effort. We could not have succeeded without our "girl Friday. "

It has not been our intention to replace the " Oracles of Delphi " but rather to " wet a finger for wind direction " and we are ....

Remaining respectfully yours,

Roger L. Young

John A. Gould, Jr.

Part I

Introduction

The North Reading School System, as a great many other Local Education Agencies, is interested in adequately providing for the needs of the majority of high school students. From forty to sixty percent of the high school students are not entering post-secondary education but rather the world of work.[1] It is the philosophy of this project that anyone leaving high school should have the basic education and skills to qualify him or her for a place in the world of work.

The Federally Funded Planning and Research Grant entitled Regional Assessment and Participative Evaluation (Pr-18) reflects the current concepts of education as outlined by the Massachusetts Department of Education, with the 1973 publication of the Educational Goals for Massachusetts. A closer look at education in Massachusetts was initiated through input supplied by Local Education Agencies. The responding school districts indicated that at present, not enough was being accomplished to adequately provide for those students enrolled in the general curriculum.[2]

The general curriculum student is defined as one who is neither enrolled in the college nor the vocational - technical curriculums. As these students provide considerable numbers entering the labor force each year, the North Reading School System recognizes the need to develop the following overall objectives:

> to assist each person in becoming familiar with job selection, preparation for initial entry into work, indoctrination to the demands of the occupational society

to expand occupational horizons

to develop sound attitudes, work habits and the worth of work

to provide information for career choices

to initiate training at the optimum advantage of the student

to interrelate the curriculum to meet the needs of occupational competency by all

If a comprehensive high school is to provide a general curriculum tailored to meet the needs of the graduating student who will immediately enter the world of work, it is imperative that the occupational community be understood. Without a clear understanding of the industrial complexion of industries located in the particular region as well as the type of occupations found in these industries, it is this project's premise that any comprehensive high school cannot adequately provide a realistic general curriculum.

Project Regional Assessment and Participative Evaluation is Phase I of a multi-phased program.

The project is a research program to establish:

what occupations are found in the North Reading region?

where these occupations are found?

what are the major and minor responsibilities of the occupations?

which businesses provide in - service training programs and of these which are receptive to extending their resources and facilities to the comprehensive high schools of the region?

Once an occupational assessment of the region is accomplished, the results will provide information that will indicate a positive direction in which to follow in order to develop occupational competency for those enrolled in the general curriculum.

Once again, Phase I provides necessary information as to:

the occupational structure of the region

the major and minor responsibilities of the occupations

aptitudes, temperment and interest analysis by occupation

employment trends by occupation

business receptiveness toward in-service training programs being extended to high school students

Now that the regional industries have been explored, Phase II will explore and define the present general curriculum. It is necessary not only to know what the needs of the various occupations are but also that which is presently being provided for in the general curriculum. Phase II will take a close look at the general curriculum and ascertain what is being provided for in the context of those areas which are important to industry.

The difference between what industry as a whole wants or demands and what is currently being provided for in the present general curriculum is the foundation for Phase III. Phase III will take the difference and design a general curriculum to meet these needs. Graphically:

Phase I	Phase II	Phase III
Analysis	Synthesis	Operation

The final product will be a clearer definition of learning experiences geared toward the occupations of today and tomorrow. These learning experiences will draw from a task pool. The task pool will be a collection center for all tasks needed to become occupationally competent in a specific occupation. The task pool will include (1) Pre-requisite Learning, (2) Component Tasks, (3) Environmental Needs, as well as the (4) Concepts found in that particular occupation. Graphically:

Learning Experiences

Task Pool

(Pre-requisite Learning
Component Tasks
Environmental Needs
Concepts)

Vocational Task	Academic Task	Personal / Social
Analysis	Analysis	Task Analysis
Industry	Teachers	Community

The North Reading plan for occupational competency is not an independent endeavor, nor we feel it should be. Project CAREER, located in Randolph, Massachusetts is a major part of the program and the use of their collected data and expertise has been utilized.

Part II

Background

The United States Department of Labor Statistics has projected that young workers will be faced with improved job opportunities in an expanding economy. However, there will be more energetic competition among workers for entry level jobs, but better advancement to higher levels where the number of competent older workers may be stretched thin. It is also projected that the labor force will have higher educational qualifications in 1980.[3]

Projections also indicate that the demand in the following areas will grow at an unusually accelerated rate:

Business and Office occupations
Distribution and Marketing occupations[4]

Thus, the occupational clusters being probed are (1) Business and Office, and (2) Marketing and Distribution.

The occupations researched embody: (See Appendix H)

Business and Office:	Bookkeeper
	Clerk-Typist
	Legal Secretary
	Personnel Clerk
	Receptionist
	Secretary
Marketing and Distribution:	Sales Clerk
	Customer Service Specialist
	Bank Teller
	General Sales Person
	Real Estate Sales Person

The selection of these occupations was made according to the following criteria:

Represents entry level occupations

Staying time on the job is greater than three months

Training needed is generally On - the - Job

Data was collected through a telephone survey with area Personnel Agencies. The results of the survey may be found in Appendix A. The purpose of the survey was to provide the first rattle out of the box for identifying those occupations for which graduating high school students can successfully qualify.

Definition of Region

It is the design of this Project to define the region as those towns which surround North Reading and are within a commuting time of thirty to forty - five (30 - 45) minutes.[5] The region selected encircles:

Haverhill	Wakefield	Lawrence
Andover	North Andover	Lowell
Billerica	Tewksbury	Lynnfield
Middleton	Peabody	Woburn
Burlington	North Reading	Reading
Stoneham	Wilmington	

Having established which occupations are being explored in what towns, the next objective is to disclose the major and minor responsibilities of the occupations.

Validation Instrument

Project CAREER, located in Randolph, Massachusetts, being a federally funded research and development project through the Massachusetts Department of Education administered by the Division of Occupational Education, has developed " task outlines." These task outlines provide the framework for the major responsibilities and duties by occupational title. Each major responsibility is then refined to indicate those precise skills necessary for the successful performance of that responsibility.

Once the task outline has been validated by the regional industries, the specific skills necessary for each occupation will then provide a foundation for a more adequate content in the general curriculum. Sample task outlines can be obtained by contacting Project CAREER directly.

In addition to determining which responsibilities are of major or minor importance or not applicable to that occupation, the validation instrument will also indicate whether that responsibility can better be taught in the High School On - the - Job or through Prior Experience.

Also, each responsibility will be studied as to Will It Change. In today's changing industry, present occupational responsibilities are either expected to remain the same, change in the near future (six months to one year) or it is uncertain as to whether or not it will change.

Career Preparation Analysis Chart

In addition to task outline, Project CAREER has provided the format for a Career Preparation Analysis Chart. The purpose of this survey tool is to define which aptitudes, interests and temperments are important ingredients of each occupation. As it is important to recognize the major and minor responsibilities of an occupations, so it is prominent that those occupational traits or characteristics be presented.

These occupational traits or characteristics will be validated as to their appropriateness for each occupation investigated.

Industry Selection

The selection of which industry will be studied in what town or city was accomplished through the utilization of existing data available through the Massachusetts Department of Employment Security. Each of the 351 cities and towns in Massachusetts are described in relation to employment in establishments subject to the Massachusetts Employment Security Law. The data does not represent employ-

ment by governmental bodies, whether it be Local, State or Federal.[6]

Each city and town is characterized according to:

Average Annual Wage of those employed in each city and town

Number of establishments found in each city and town

Total employment of the aggregate number of establishments

Employment figures are then illustrated for the eight major industries characterized two - digit Standard Industrial Classification Coding. (SIC CODE) (SEE Appendix C)

The employment data by each city or town of the region is present in Appendix D. Appendix E represents the employment data for each city and town in terms of percentages.

For example: In Appendix E, within Wakefield, employment figures indicate that:

6.6% is Contract Construction

32.8% is Manufacturing

1.7% is Transportation, Communication or Utilities

19.3% is Wholesale and Retail Trade

22.7% is Finance, Insurance or Real Estate

16.2% is Services

In studying the data found in Appendixes D and E, the largest concentration of employment is found in the following three areas:

Manufacturing

Wholesale and Retail Trade

Services

These three are the primary industries to be investigated as well as Finance, Insurance and Real Estate in Wakefield because of the large percentage employed.

Business Selection

The selection of which businesses to interview was made according to the following criteria :

Must employ fifty or more (exceptions : Real Estate, Legal Secretary)

Rationale: The larger businesses will generally employ a greater variety of occupations as well as be in a better position to view the trends of the industry as a whole.

The Standard Industrial Classification Code for each business must be either : (See Appendix B)

Manufacturing

Wholesale and Retail Trade

Services

Contact Person

The contact person for each business initially was the Personnel Manager as opposed to an incumbent or other administrator.

Rationale : An administrator who hires applicants to fill vacancies should be most likely to know what the various responsibilities and duties of the cited occupations are.

Sample Selection

In selecting a suitable sample, it was first necessary to obtain a complete listing of establishments by employee size, city or town, and by Standard Industrial Classification Coding. The Department of Employment Security was in a position to be able to supply a computer tape listing of all establishments located in each town. Also, a record layout of the computer tape was provided for.

With the acquisition of the tape, it became necessary to develop a program to derive the desired information as well as a computer to perform the calculations.

Volkswagon of America was gracious enough to share their collective expertise in program development and provide the computer time to procure the data. The result was a comprehensive list of establishments by individual city and town, in descending order of size, by SIC Code as well as the mailing labels for all establishments which employ fifty (50) or more.

Those establishments chosen for the survey represented each city or town of the region as well as the SIC Coding of Manufacturing, Wholesale and Retail Trade as well as Finance, Insurance, and Real Estate for Wakefield. The list was secured in a random fashion.

The selected businesses were then contacted by mail introducing the Research Project by letter and through use of a specially designed brochure.

Collection of Data

Each cooperating establishment was contacted in person or by means of the telephone by the Research Staff. During each interview, the Project was explained as well as the purpose of the survey tools. Personnel administrators supplied the data as it applied to their establishments. The collected data was then transferred on to mark sense cards for statistical interpretation.

Statistical Program

The statistical program utilized was provided for by an outside consultant associated with Northeastern University. Northeastern University also processed the data through their computer facilities. The results of the furnished processed data will be found in the Statistical Information section of the report.

Part III

Industrial Structure of the Region

This part of the Report will present the Industrial Structure of the Region utilizing available data provided by the Department of Employment Security.[7]

Appendix C indicates the seventeen (17) cities and towns included in the Region by:

1. Total number of establishments housed in each city and town
2. Total number employed within each city and town
3. Total number employed in each major industrial classification by city and town

For example : There are 522 business establishments located in Wakfield and the total employment of these 522 firms numbers 8,034. The total of those employed in Wakefield is further described to show that:

537 are employed in Contract Construction
2,641 " " " Manufacturing
142 " " " Transportation, Communication, Utilities
1,558 " " " Wholesale and Retail Trade
1,829 " " " Finance, Insurance and Real Estate
1,307 " " " Services

Appendix C is then refined to indicate that percentage of the Region's total firms located in each city and town as well as the regional percentage of employment by each city and town. This data comprises Appendix D.

For example: Wakefield houses six percent (6%) of the aggregate businesses located in the Region which employs five percent (5%) of all those employed in the Region.

Within Wakefield, the employment picture is:

7%	of the total regional employment is in	Contract Construction
4%	" " " " " " "	Manufacturing
3%	" " " " " " "	Transportation, Communication, Electric, Gas, Sanitary Services
4%	" " " " " " "	Wholesale and Retail Trade
26%	" " " " " " "	Finance, Insurance and Real Estate
4%	" " " " " " "	Services

Observations

Appendix D

Lowell firms employ 17% of all employed in the Contract Construction industry, while Burlington houses 12%, Lawrence 11% and Woburn 10%. The Contract Construction industry employees 4% of the total employed within this Region.

Lawrence and Lowell both enlist 20% of all those persons associated with the Manufacturing industry, while North Andover retains 13% and Andover 9%. The Manufacturing industry constitutes 43% of the total employed within this Region.

Lowell firms place on the payroll 24% of the total employed in the Transportation, Communication and Utilities industries, while Haverhill and Lawrence both maintain 13% and Woburn 11%. This Industrial Classification embodies 2% of the total employed.

Lowell again leads the Region in the Wholesale and Retail Trade Classification with 16%, Lawrence 14%, Woburn 9% and Haverhill registers 8% of the total employed in this Industrial Classification

The Wholesale and Retail Trade makes up 25% of those employed in this Region.

Within Wakefield, is found 26% of the Region's total employment in Finance, Insurance and Real Estate. Lawrence engages the services of 21%, Lowell 20%, and Andover 9%. As a percentage of the total employment for the Region, the Finance, Insurance and Real Estate industries embody 4%.

Employed in Lowell is 19% of those involved in the Services Classification, while Burlington indicates 16%, Lawrence 14% and Wilmington with 8%. In this Region, 18% of all those employed are in the Services Classification.

The usefulness of Appendix D is that a clear indication is given as to where the majority of persons are employed within the major Industrial Classifications. The inference being that within those towns and cities where the mployment for a given industry is high, there is a large number of employment opportunities.

Observations

Appendix E

Appendix E displays within each town or city that percentage of those employed for each Industrial Classification. For example, 6.6% of all persons employed within Wakefield are engaged in the Contract Construction industry.

The data cited in the appendix is useful in determining what type of industrial community is in each city and town of the Region. Within Wakefield, the percentage of those employed in the Finance, Insurance and Real Estate industries of the Region is 22.7%, while in North Andover 74.7% of the work force is employed in the Manufacturing industry.

Since this project surveyed only those firms which employ fifty (50) or more. it would be appropriate to describe where these leaders in industry are located.

Observations

Appendix F

Appendix F exhibits that there are 604 business establishments which employ fifty or more persons. This exhibit also brings into view not only where these large employers are located, but also what Industrial Classification they belong to. For example, in Wakefield, there are thirty (30) firms employing more than fifty persons, of which ten (10) are classified as belonging to the Manufacturing Classification. Lowell leads the list with 113 firms with Lawrence, Burlington, Haverhill and Woburn representing those cities and towns housing the greatest number of large employers.

In summary, within the Region, the majority of those employed are associated with the Manufacturing Classification, Wholesale and Retail Trade industries as well as Services. The industry employment figures within each town also bring out this fact. The Appendixes C, D, E and F further express the employment picture for each city and town of the region.

Part IV

Validation Instrument

Reporting the responses associated with the validation instrument will comprise this section of the report.

The validation instrument outlines the major responsibilities of each occupation as provided from Project CAREER. The purpose in validating the research material of Project CAREER is to refine their information to represent the region.

Each responsibility was rated as to:

1. Its order of importance to the firm ... major, minor, not applicable
2. Training needed to fulfill this responsibility, where it can best be taught ... in High School, On-the-Job, or from Prior Experience
3. Will It Change, the occupational responsibility, in the next six months to one year ... yes, no, uncertain

The business representatives (See Appendix G) were also asked to complete the Occupational Preparation Analysis Chart which indicates those aptitudes, temperments and interests needed for the successful performance of the occupation.

Four questions were then presented to the Personnel Managers concerning the employment trends.

1. Please estimate how many applicants are hired each year to fill vacancies.
2. About how long do employees stay on this job ?
3. When an employee leaves this position, where do they generally go ?
4. What is the expected change in the number of positions that will be available in the next six months to one year ?

This information will be used in the discussion of the employment outlook by occupation.

All numerical data reflects the percentage of responses recorded for each occupation.

Bookkeeper : See Table 1

Those responsibilities of major importance as revealed are:

Recording company transactions

Handling payroll

Balancing monthly statements

Performing banking procedures

Handling credit and collection

Managing salesmen's commissions

Training needed for these responsibilities was split between High School and On-the-Job training. Most firms indicated that it was uncertain as to whether those responsibilities would change in the near future.

Many of the responsibilities have or are in the process of being divided into special areas, with a degreed accountant or comptroller filling this position in many large firms. More and more firms are utilizing the services of a computer for the accounting functions.

Aptitudes needed for this occupation include verbal, numerical, clerical spelling and grammar.

Temperment desired includes being able to perform varied duties with frequent change, matching specified instructions, working with others, analyzing facts and figures, as well as precision and accuracy.

Interests sought encompass business contact with people, routine - system, machines and procedures, as well as seeking tangible results.

The number of applicants hired each year to fill vacancies is 0 to 3, while employees in this occupation stay on the job greater than one year. When an employee leaves this position, it is split as to whether he or she will go elsewhere or remain in the company, and the number of positions of bookkeeper in the company will remain the same for the next year.

Indications are that there are limited openings each year for a bookkeeper. Openings will develop from vacancies as opposed to expansion.

Clerk - Typist : See Table 2

The major responsibilities of the clerk - typist as related are:

Performing typing duties

Filing

Reproducing data

Training needed for these responsibilities can be best accomplished in the high school curriculum. As in the instance of a bookkeeper, it is uncertain as to whether or not these responsibilities will change in the near future. The major reason why it is uncertain is due to the centralization of typing pools through the use of a telephone communication system to reduce the number of "typists" employed. Also, computer systems are being utilized to minimize the amount of paper being filed.

Accuracy outweighed the need for speed in typing. If a person is accurate, then the minimums for speed are lowered.

Aptitudes needed include verbal, numerical, clerical, spelling and grammar.

Temperments desired embody varied duties, matching specified instructions, working with others, repeated, set procedures as well as precision and accuracy.

Interests sought encompass business contact with people, routine - system, communication of ideas, machines and procedures, and again, tangible results.

Forty-one (41%) percent indicated that between 0 and 3 persons were hired each year and that employees generally stay greater than one year. When leaving the position, they generally go elsewhere and the number of positions of a clerk-typist will remain the same in the next six months to one year.

Legal Secretary : See Table 3

Responsibilities of major importance for the occupation of legal secretary entail:

Typing of legal documents
Performing other office typing skills
Acting as a receptionist
Performing mail handling skills
Personally assisting employer
Performing filing skills

Training needed to perform these responsibilities is generally sought on-the-job. Again, most employers indicated that it was uncertain as to whether or not the responsibilities will change. It was an observation that many lawyers are beginning to form cooperative arrangements between themselves and that the legal secretarial duties will be pooled.

Aptitudes, temperments and interests inquired do not accurately indicate what is required of a legal secretary as eight of the eleven surveyed did not complete this questionnaire.

Ninety percent (90%) of the respondents indicated that from 0 to 3 applicants are hired each year and that they generally stay with the firm longer than a year. When a legal secretary does leave the position, he or she generally goes elsewhere and the number of positions available will remain the same in the next six months to one year.

It is important to note that high school graduates may qualify for a legal secretarial position more readily with a small legal office. The greatest number

of lawyers maintain separate offices and are willing to train the young entrants.

Personnel Clerk : See Table 4

The responsibilities that are of major importance as understood are:

Dealing with newly hired employees

Maintaining employee records

Administering health and insurance programs

Primary training needed for these responsibilities is on-the-job. These responsibilities are either not expected to change or the firms are uncertain.

Aptitudes desired include verbal, numerical, clerical, spelling and grammar.

Temperments suggested encompass varied duties, matching specified instructions, working with others, communication of ideas, machines and procedures, as well as tangible results.

From 0 to 3 applicants are hired each year to fill vacancies and personnel clerks stay in the occupation greater than a year. When an employee leaves this position, he or she generally stays in the company and the number of positions will remain the same in the next six months to one year.

Receptionist : See Table 5

Of major importance to this occupation is the ability to:

Receive visitors

Handle telephone and communication systems

Training needed is split between on-the-job and being taught in high school.

These responsibilities are not expected to change in the next six months to one year.

Aptitudes implied include verbal, numerical, clerical, spelling and grammar. It is noteworthy that many receptionists perform typing duties in between visitors

and communication functions.

Temperments inferred are varied duties, matching specified instructions, working with others, interpreting personal feelings, as well as precision and accuracy.

Interests noticed embody business contact with people, routine - system, communication of ideas, machines and procedures and tangible results.

The number of applicants hired each year is from 0 to 3 and receptionists generally stay greater than a year. It is split as to where a person goes when he or she leaves the position and number of receptionist positions will remain the same.

Noteworthy is that employers seek poise, maturity and friendliness within the young applicants for this position.

Secretary : See Table 6

The major responsibilities of the secretary suggested are:

Typing
Filing
Taking dictation
Transcription
Handling appointments
Performing mail handling duties
Performing telephone related duties

For the most part, employers indicated that these skills can best be developed in the high school. Also, these occupational responsibilities are not expected to change in the next six months to one year.

Aptitudes desired include verbal, numerical, clerical, spelling and grammar.

Temperments sought encircle varied duties, matching specified instructions,

working with others, interpreting personal feelings, repeated, set procedures, and of course, precision and accuracy.

Interests alluded to are business contact with people, routine - system, communication of ideas, machines and procedures as well as tangible results.

Applicants hired each year to fill secretarial vacancies number between 0 and 3 and stay greater than a year. Forty - six percent (46%) leave the company while thirty - four percent (34%) stay in the company. Again, the number of positions of a secretary will remain the same in the next six months to one year.

Sales Clerk : See Table 7

Responsibilities of major importance unveiled are:

Performing customer services
Writing and dispositioning sales checks
Recording transactions
Handling employee sales
Observing delivery regulations
Accepting currency and cash documents
Following return procedures
Correcting errors
Following special procedures
Charging sales tax

Training needed for these responsibilities is generally on-the-job. All firms indicated that these responsibilities will not change or they are uncertain.

Aptitudes encouraged are verbal, numerical, clerical, and spelling.

Temperments sought include varied duties, matching specified instructions, working with others and precision and accuracy.

Interests implied are business contact with people, routine - system, machines and procedures and tangible results.

Applicants hired to fill vacancies include the two ranges of 0 to 3 and greater than 10. It is split as to how long they stay. Upon leaving the position, employees will generally go elsewhere and fifty percent (50%) of the respondents indicate that additional sales clerks will be employed in the next six months to one year.

Customer Service Specialist : See Table 8

The following represent the responsibilities of major importance:

Maintaining an information service desk

Maintaining store services for customers

Carrying out miscellaneous duties

Training desired is either on-the-job or prior experience and the job responsibilities are not expected to change in the near future.

Aptitudes sought include verbal, numerical, clerical, spelling and grammar.

Temperment desired encircles varied duties, matching specified instructions, working with others, interpreting personal feelings, and precision and accuracy.

Interests implied are business contact with people, machines and procedures and tangible results.

Thirty - eight percent (38%) indicated that they hire from 0 to 3 people each year and that employees stay on the job greater than a year. However, when they do leave, they go elsewhere and the number of positions are expected to remain the same.

Bank Teller : See Table 9

Responsibilities of major importance verified are:

Observing safety procedures

Performing customer services

Handling coin and currency

Handling deposits

Cashing checks and redeeming bonds

Handling savings withdrawals and accepting payments

Training needed is primarily on-the-job and the job responsibilities are not expected to change.

Aptitudes sought include verbal, numerical, clerical and mechanical.

Temperments desired embody varied duties, working with others, set procedures and precision and accuracy.

Interests alluded to are business contact with people, routine - system, communication of ideas, machines and tangible results.

Thirty percent (30%) responded that the number of vacancies filled each year is greater than ten, yet employees stay on the job greater than one year. When leaving, they generally go elsewhere and the number of positions will remain the same in the next six months to one year.

Noteworthy is that most banks contacted promote from within.

General Sales Person : See Table 10

The most important responsibilities alluded to are:

Researching product and market

Planning call schedule

Maintaining and handling promotional material

Performing customer service duties

The type of training needed is on-the-job and the job responsibilities are not expected to change.

Aptitudes supported are verbal, numerical, clerical, spelling and grammar.

Temperments sought include varied duties, matching specified instructions, working with others, influencing other peop'e's ideas, interpreting personal feelings, decision making, risks, and precision and accuracy.

Interests desired are business contact with people, communication of ideas, machines and tangible results.

From 0 to 3 applicants are hired each year and they stay greater than one year. They generally go elsewhere when leaving the position and the expected number of positions will remain the same.

Real Estate Sales Person : See Table 11

The most important responsibilities of this occupation include:

Managing the rental of apartments

Obtaining special listings

Handling acquisition and sale of income property

All responsibilities are avie to be taught in high school, yet on the job training is important. The respondents indicated uncertainty as to whether or not the responsibilities will change.

Aptitudes, temperments and interests do not give a true picture of the Real Estate industry as eighty percent (80%) of the companies did not complete this portion of the questionnaire.

Table 1.1: Bookkeeper

MAJOR RESPONSIBILITIES	Importance			Training Needed			Will It Change		
	Major	Minor	Non-Applicable	High School	On-the-Job	Prior Experience	Yes	Uncertain	No
01. Records all company transaction	83.9	3.2	12.9	58.1	16.1	16.1	6.5	25.8	67.7
02. Handles and supervises payroll	41.9	16.1	41.9	9.7	35.5	19.4	3.2	25.8	54.8
03. Balances monthly bookkeeping to trial balances	67.7	9.7	22.6	32.3	25.8	19.4	6.5	22.6	54.8
04. Performs banking procedures	45.2	32.3	22.6	29.0	38.7	12.9	9.7	29.0	54.8
05. Handles credits and collections	35.5	19.4	41.9	22.6	19.4	9.7	3.2	19.4	51.6
06. Manages salesman's commissions	29.0	29.0	38.7	15.1	22.6	45.2	6.5	19.4	51.6
07. Performs supervisory duties	19.4	16.1	58.1	12.9	12.9	16.1	6.5	16.1	38.7

OCCUPATIONAL PREPARATION ANALYSIS CHART

Table 1.2 : Bookkeeper

APTITUDES

verbal	67.7	clerical	77.4
numerical	87.1	mechanical	6.5
abstract	12.9	spelling	64.5
spatial	3.2	grammar	58.1

TEMPERMENT:

varied duties, frequent change	48.4	repeated, set procedure	35.6
matching specified instructions	51.6	directing and planning for others	6.5
working with others	71.0	working alone and apart	25.8
influencing other people's ideas	9.7	risks, unexpected events, emergencies	12.9
interpreting personal feelings	29.0	analyzing facts and figures	48.4
making empirical judgements, decisions	12.9	precision, accuracy	54.8

INTERESTS:

dealing with things and objects	22.6	science and technology	0.0
business contact with people	64.5	machines and procedures	61.3
routine, system	48.4	social welfare	6.5
communication of ideas	22.6	abstraction, creativity	3.2
prestige, esteem	9.7	tangible results	51.6

Table 1.3 : Bookkeeper

Total Number of Questionnaires Filled Out - 31

1. Please estimate how many applicants are hired each year to fill vacancies.

0-3	54.8	GT 10	12.9
3-5	6.5	No response	19.4
6-8	6.5		

2. About how long do employees stay on this job?

less than one year	12.9
more than one year	67.7
no response	19.4

3. When an employee leaves this position, where do they generally go?

elsewhere	35.5
stay in company	35.5
no response	29.0

4. What is the expected change in the number of positions that will be available in the next six months to one year?

more	22.6
less	6.5
same	51.6
no response	19.4

Table 2.1 : Clerk-Typist

MAJOR RESPONSIBILITIES	Importance			Training Needed			Will It Change		
	Major	Minor	Non-Applicable	High School	On-the-Job	Prior Experience	Yes	Uncertain	No
01. Performs typing duties	95.8	4.2	0.0	97.9	0.0	0.0	6.3	22.9	70.8
02. Acts as receptionist	10.4	54.2	35.4	25.0	43.8	2.1	6.3	20.7	58.3
03. Files and maintains file records	87.3	12.5	4.2	50.0	39.6	2.1	8.3	25.0	66.7
04. Performs mail handling duties	22.9	60.4	14.6	25.0	58.3	0.0	4.2	29.2	64.6
05. Performs finance and accounting duties	10.4	20.8	64.6	31.3	4.2	0.0	0.0	25.0	45.8
06. Deals with personnel	14.6	37.5	43.8	18.8	37.5	4.2	2.1	27.1	50.0
07. Reproduces data	54.8	39.6	12.5	50.0	35.4	0.0	4.2	25.0	58.3
08. Maintains office supplies	22.9	43.8	29.2	14.6	50.0	0.0	2.1	22.9	56.3
09. Operates other business machinery	25.0	54.2	16.7	50.0	29.2	2.1	4.2	25.0	60.4

OCCUPATIONAL PREPARATION ANALYSIS CHART

Table 2.2 : Clerk Typist

APTITUDES

verbal	75.0	clerical	87.5
numerical	68.8	mechanical	4.2
abstract	6.3	spelling	85.4
spatial	0.0	grammar	83.3

TEMPERMENT

varied duties, frequent change	52.1	repeated, set procedure	43.8
matching specified instructions	54.2	directing and planning for others	12.5
working with others	64.4	working alone and apart	33.3
influencing other people's ideas	12.5	risks, unexpected events, emergencies	10.4
interpreting personal feelings	35.4	analyzing facts and figures	25.0
making empircal judgements, decisions	12.5	precision, accuracy	54.2

INTERESTS

dealing with things and objects	27.1	science and technology	2.1
business contact with people	66.7	machines, procedures	68.8
routine, system	43.8	social welfare	6.3
communication of ideas	33.3	abstraction, creativity	8.3
prestige, esteem	12.5	tangible results	45.8

Table 2.3 : Clerk-Typist

Total Number of Questionnaires Filled Out - 48

1. Please estimate how many applicants are hired each year to fill vacancies.

0-3	41.7	Greater than 10	18.8
3-5	18.8	No response	14.6
6-8	6.3		

2. About how long do employees stay on this job?

less than one year	10.4
more than one year	72.9
no response	16.7

3. When an employee leaves this position, where do they generally go?

elsewhere	41.7
stay in company	39.6
no response	18.8

4. What is the expected change in the number of positions that will be available in the next six months to one year?

more	22.9
less	4.2
same	56.3
no response	16.7

Table 3.1: Legal Secretary

MAJOR RESPONSIBILITIES	Importance			Training Needed			Will It Change		
	Major	Minor	Non-Applicable	High School	On-the-Job	Prior Experience	Yes	Uncertain	No
01. Types general legal documents and other forms	100.0	0.0	0.0	54.5	36.4	9.1	0.0	63.6	36.4
02. Performs other office typing skills	81.8	18.2	0.0	45.5	45.5	9.1	0.0	63.6	36.4
03. Operates office machines and equipment	45.5	54.3	0.0	36.4	63.6	0.0	0.0	63.6	36.4
04. Acts as a receptionist	63.3	27.3	9.1	27.3	63.6	0.0	0.0	63.6	27.3
05. Performs mail handling skill	72.7	18.2	9.1	36.4	54.5	0.0	0.0	63.6	27.3
06. Maintains supplies	36.4	54.5	9.1	18.2	72.7	0.0	0.0	63.6	27.3
07. Personally assists employer	72.7	18.2	9.1	36.4	54.5	9.1	9.1	63.6	27.3
08. Performs filing skills	72.7	27.3	0.0	45.5	54.5	0.0	0.0	63.6	27.3

OCCUPATIONAL PREPARATION ANALYSIS CHART

Table 3.2 : Legal Secretary

APTITUDES

verbal	36.4	clerical	36.4
numerical	27.3	mechanical	9.1
abstract	18.2	spelling	36.4
spatial	9.1	grammar	36.4

TEMPERMENT

varied duties, frequent change	27.3	repeated, set procedure	9.1
matching specified instructions	9.1	directing and planning for others	0.0
working with others	18.2	working alone and apart	0.0
influencing other people's ideas	0.0	risks, unexpected events, emergencies	0.0
interpreting personal feelings	9.1	analyzing facts and figures	9.1
making empircal judgements, decisions	0.0	precision, accuracy	18.2

INTERESTS

dealing with things and objects	9.1	science and technology	9.1
business contact with people	36.4	machines, procedures	18.2
routine, system	27.3	social welfare	0.0
communication of ideas	18.2	abstraction, creativity	0.0
prestige, esteem	9.1	tangible results	18.2

Table 3.3 : Legal Secretary

Total Number of Questionnaires Filled Out - 11

1. Please estimate how many applicants are hired each year to fill vacancies.

0-3	90.9
no response	9.1

2. About how long do employees stay on this job?

more than one year	90.9
no response	9.1

3. When an employee leaves this position, where do they generally go?

elsewhere	72.7
stay in company	18.2
no response	9.1

4. What is the expected change in the number of positions that will be available in the next six months to one year?

more	9.1
same	81.8
no response	9.1

Table 4.1 : Personnel Clerk

MAJOR RESPONSIBILITIES	Importance			Training Needed			Will It Change		
	Major	Minor	Non-Applicable	High School	On-the-Job	Prior Experience	Yes	Uncertain	No
01. Performs hiring duties	37.5	16.7	45.8	25.0	33.3	0.0	12.5	29.2	41.7
02. Deals with newly hired employees	79.2	12.5	4.2	33.3	54.2	4.2	0.0	29.2	62.5
03. Maintains employee records	70.8	16.7	12.5	20.8	62.5	4.2	4.2	33.3	54.2
04. Administers health and insurance programs	58.3	29.2	12.5	16.7	70.8	0.0	4.2	50.0	41.7
05. Maintains employee relations	20.8	50.0	25.0	16.7	50.0	8.3	0.0	41.7	50.0

OCCUPATIONAL PREPARATION ANALYSIS CHART

Table 4.2 : Personnel Clerk

APTITUDES

verbal	83.3	clerical	83.3
numerical	66.7	mechanical	4.2
spatial	4.2	spelling	79.2
abstract	8.3	grammar	83.3

TEMPERMENT

varied duties, frequent change	62.5	repeated, set procedure	37.5
matching specified instructions	54.2	directing and planning for others	8.3
working with others	79.2	working alone and apart	33.3
influencing other people's ideas	25.0	risks, unexpected events, emergencies	25.0
interpreting personal feelings	62.5	analyzing facts and figures	20.8
making empirical judgements, decisions	12.5	precision, accuracy	54.2

INTERESTS

dealing with things and objects	12.5	science and technology	0.0
business contact with people	79.2	machines, procedures	45.8
routine, system	54.2	social welfare	20.8
communication of ideas	58.3	abstraction, creativity	4.2
prestige, esteem	16.7	tangible results	45.8

Table 4.3 : Personnel Clerk

Total Number of Questionnaires Filled Out - 24

1. Please estimate how many applicants are hired each year to fill vacancies.

0-3	83.3
3-5	4.2
no response	12.5

2. About how long do employees stay on this job?

less than one year	4.2
more than one year	83.3
no response	12.5

3. When an employee leaves this position, where do they generally go?

elsewhere	37.5
stay in company	41.7
no response	20.8

4. What is the expected change in the number of positions that will be available in the next six months to one year?

more	8.3
less	16.7
same	62.5
no response	12.5

Table 5.1 : Receptionist

MAJOR RESPONSIBILITIES	Importance			Training Needed			Will It Change		
	Major	Minor	Non-Applicable	High School	On-the-Job	Prior Experience	Yes	Uncertain	No
01. Receives visitors	97.0	0.0	2.2	62.3	33.3	2.2	2.2	26.7	71.1
02. Handles telephone and communication systems	91.1	8.9	0.0	20.0	73.3	6.7	6.7	24.4	68.9
03. Handles mail	28.9	28.9	42.2	24.4	42.2	2.2	28.9	60.0	11.1
04. Performs typing skills	37.8	37.8	24.4	62.2	17.8	2.2	4.4	28.9	57.8
05. Performs miscellaneous duties	28.9	57.8	6.7	28.9	55.6	0.0	8.9	28.9	53.2

OCCUPATIONAL PREPARATION ANALYSIS CHART

Table 5.2 : Receptionist

APTITUDES

verbal	84.4	clerical	80.0
numerical	60.0	mechanical	11.1
abstract	4.4	spelling	71.1
spatial	0.0	grammar	77.8

TEMPERAMENT

varied duties, frequent change	60.0	repeated, set procedure	37.8
matching specified instructions	53.3	directing and planning for others	13.4
working with others	71.1	working alone and apart	35.6
influencing other people's ideas	17.8	risks, unexpected events, emergencies	24.4
interpreting personal feelings	53.3	analyzing facts and figures	17.8
making empirical judgements, decisions	15.6	precision and accuracy	53.3

INTERESTS

dealing with things and objects	24.4	science and technology	0.0
business contact with people	73.3	machines, procedures	51.1
routine, system	48.9	social welfare	11.1
communication of ideas	42.2	abstraction, creativity	11.1
prestige, esteem	17.8	tangible results	42.2

Table 5.3 : Receptionist

Total Number of Questionnaires Filled Out - 45

1. Please estimate how many applicants are hired each year to fill vacancies.

0-3	84.4
3-5	4.4
no response	11.2

2. About how long do employees stay on this job?

less than one year	15.6
more than one year	75.6
no response	8.9

3. When an employee leaves this position, where do they generally go?

elsewhere	42.2
stay in company	40.0
no response	17.8

4. What is the expected change in the number of positions that will be available in the next six months to one year?

more	8.9
less	8.9
same	73.3
no response	8.9

Table 6.1 : Secretary

MAJOR RESPONSIBILITIES	Importance			Training Needed			Will It Change		
	Major	Minor	Non-Applicable	High School	On-the-Job	Prior Experience	Yes	Uncertain	No
01. Types	100.0	0.0	0.0	92.7	4.9	2.4	0.0	22.0	78.0
02. Files	73.2	24.4	2.4	56.1	36.6	7.3	2.4	22.0	75.6
03. Takes Dictation	63.4	29.3	7.3	73.2	7.3	14.6	2.4	29.3	65.9
04. Transcribes	53.7	43.1	12.2	61.0	24.4	9.8	0.0	29.3	65.9
05. Handles appointments	65.9	26.8	7.3	43.9	41.5	9.8	2.4	22.0	73.2
06. Performs mail handling duties	61.0	29.3	9.8	41.5	43.9	4.9	0.0	22.0	70.7
07. Performs telephone related duties	43.9	43.9	12.2	36.6	48.8	4.9	2.4	29.3	65.9
08. Operates office machines and equipment	36.6	51.2	12.2	43.9	39.0	9.8	2.4	24.4	68.3
09. Performs receptionist duties	31.7	41.5	26.8	36.6	36.6	4.9	0.0	26.8	65.9
10. Supervises subordinates	4.9	41.5	53.7	22.0	26.8	12.2	0.0	29.3	46.3

OCCUPATIONAL PREPARATION ANALYSIS CHART

Table 6.2 : Secretary

APTITUDES

verbal	82.9	clerical	78.0
numerical	70.0	mechancial	7.3
abstract	9.8	spelling	78.0
spatial	4.9	grammar	82.9

TEMPERMENT

varied duties, frequent change	61.0	repeated, set procedure	31.7
matching specified instructions	43.9	directing and planning for others	14.6
working with others	65.9	working alone and apart	24.4
influencing other people's ideas	17.1	risks, unexpected events, emergencies	14.6
interpreting personal feelings	46.3	analyzing facts and figures	34.1
making empirical judgements, decisions	24.4	precision, accuracy	53.7

INTERESTS

dealing with things and objects	17.1	science and technology	0.0
business contact with people	73.2	machines, procedures	51.2
routine, system	36.6	social welfare	12.2
communication of ideas	41.5	abstraction, creativity	12.2
prestige, esteem	14.6	tangible results	46.3

Table 6.3 : Secretary

Total Number of Questionnaires Filled Out - 41

1. Please estimate how many applicants are hired each year to fill vacancies.

0-3	53.7	Greater than 10	17.1
3-5	14.6		
6-8	9.8		

2. About how long do employees stay on this job?

less than one year	2.4
more than one year	87.8
no responses	9.8

3. When an employee leaves this position, where do they generally go?

elsewhere	46.3
stay in company	34.1
no response	19.5

4. What is the expected change in the number of positions that will be available in the next six months to one year?

more	9.8
less	0.0
same	80.5
no response	9.8

VALIDATION INSTRUMENT

Table 7.1 : Sales Clerk

	Importance			Training Needed			Will It Change		
MINOR RESPONSIBILITIES	Major	Minor	Non-Applicable	High School	On-the-Job	Prior Experience	Yes	Uncertain	No
01. Opens for the day	25.0	33.3	41.7	16.7	58.3	0.0	0.0	50.0	25.0
02. Performs customer services	66.7	25.0	8.3	25.0	66.7	0.0	0.0	41.7	50.0
03. Writes and dispositions saleschecks	50.0	16.7	33.3	16.7	58.3	0.0	0.0	41.7	33.3
04. Records transactions	66.7	8.3	25.0	16.7	66.7	0.0	0.0	41.7	41.7
05. Authorizes account sales	16.7	25.0	58.3	16.7	50.0	0.0	0.0	41.7	25.0
06. Handles employee sales	41.7	16.7	41.7	16.7	58.3	0.0	0.0	41.7	41.7
07. Observes delivery regulations	41.7	25.0	33.3	16.7	66.7	0.0	0.0	41.7	50.0
08. Accepts currency and cash documents	41.7	25.0	33.3	16.7	58.3	0.0	0.0	41.7	41.7
09. Maintains working cash fund	25.0	16.7	58.3	25.0	50.0	0.0	0.0	41.7	41.7
10. Follows return procedure	50.0	8.3	41.7	8.3	58.3	0.0	0.0	50.0	25.0

Table 7.1 Sales Clerk

MAJOR RESPONSIBILITIES	Importance			Training needed			Will It Change		
	Major	Minor	Non-Applicable	High School	On-the-job	Prior Experience	Yes	Uncertain	No
11. Corrects errors	50.0	33.3	16.7	33.3	50.0	0.0	0.0	41.7	50.0
12. Follows special procedures	66.7	25.0	8.3	25.0	75.0	0.0	8.3	58.3	33.3
13. Observes merchandise controls	25.0	16.7	58.3	16.7	50.0	0.0	0.0	41.7	33.3
14. Observes inventory shortage controls	25.0	16.7	58.3	16.7	50.0	0.0	0.0	41.7	33.3
15. Charges sales tax	41.7	8.3	50.0	16.7	50.0	0.0	0.0	41.7	33.3
16. Closes for the day	25.0	33.3	41.7	8.3	58.3	0.0	0.0	41.7	33.3
17. Performs other special duties	33.3	25.0	8.3	8.3	41.7	0.0	0.0	16.7	33.3

OCCUPATIONAL PREPARATION ANALYSIS CHART

Table 7.2 : Sales Clerk

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APTITUDES

verbal	41.7	clerical	58.3
numerical	58.3	mechancial	25.0
abstract	0.0	spelling	41.7
spatial	0.0	grammar	33.3

TEMPERMENT

varied duties, frequent change	41.8	repeated, set procedure	25.0
matching specified instructions	41.7	directing and planning for others	0.0
working with others	50.0	working alone and apart	0.0
influencing other people's ideas	16.7	risks, unexpected events, emergencies	33.3
interpreting personal feelings	8.3	analyzing facts and figures	16.7
making empirical judgements , decisions	25.0	precision, accuracy	50.0

INTERESTS

dealing with things and objects	25.0	science and technology	0.0
business contact with people	58.3	machines, procedures	50.0
routine, system	33.3	social welfare	0.0
communication of ideas	16.7	abstraction, creativity	0.0
prestige, esteem	8.3	tangible results	33.3

Table 7.3:Sales Clerk

Total Number of Questionnaires Filled Out - 12

1. Please estimate how many applicants are hired each year to fill vacancies.

0-3	25.0	Greater than 10	25.0
3-5	8.3	no response	41.7

2. About how long do employees stay on this job?

less than one year	33.3
more than one year	33.3
no response	33.3

3. When an employee leaves this position, where do they generally go?

elsewhere	66.7
stay in company	0.0
no response	33.3

4. What is the expected change in the number of positions that will be available in the next six months to one year?

more	33.3
less	0.0
same	33.3
no response	33.3

Table 8.1 : Customer Service Specialist

MAJOR RESPONSIBILITIES	Importance			Training Needed			Will It Change		
	Major	Minor	Non-Applicable	High School	On-the-Job	Prior Experience	Yes	Uncertain	No
01. Maintains an information desk	88.9	5.6	5.6	38.9	50.0	5.6	5.6	38.9	50.0
02. Maintains store services for customer	44.4	5.6	44.4	22.2	33.3	44.4	5.6	33.3	33.3
03. Processes credit applications	11.1	33.3	50.0	22.2	16.7	5.6	0.0	38.9	27.8
04. Carries out miscellaneous duties	55.6	38.9	5.6	16.7	77.8	0.0	11.1	38.9	44.4

OCCUPATIONAL PREPARATION ANALYSIS CHART

Table 8.2 : Customer Service Specialist

APTITUDES

verbal	72.2	clerical	72.2
numerical	72.2	mechancial	11.1
abstract	0.0	spelling	50.0
spatial	0.0	grammar	61.1

TEMPERAMENT

varied duties, frequent change	61.1	repeated, set procedure	22.2
matching specified instructions	50.0	directing and planning for others	5.6
working with others	55.6	working alone and apart	11.1
influencing other people's ideas	22.2	risks, unexpected events, emergencies	16.7
interpreting personal feelings	44.4	analyzing facts and figures	27.8
making empirical judgements, decisions	27.8	precision, accuracy	61.1

INTERESTS

dealing with things and objects	5.6	science and technology	0.0
business contact with people	72.2	machines, procedures	50.0
routine, system	22.2	social welfare	5.6
communication of ideas	33.3	abstraction, creativity	5.6
prestige, esteem	5.6	tangible results	50.0

Table 8.3 : Customer Service Specialist

Total Number of Questionnaires Filled Out - 18

1. Please estimate how many applicants are hired each year to fill vacancies.

0-3	38.9	8-10	5.6
3-5	22.2	Greater than 10	5.6
6-8	16.7	no response	16.7

2. About how long do employees stay on this job?

less than one year	11.1
more than one year	77.8
no response	11.1

3. When an employee leaves this position, where do they generally go?

elsewhere	44.4
stay in company	38.9
no response	16.7

4. What is the expected change in the number of positions that will be available in the next six months to one year?

more	16.7
less	16.7
same	55.6
no response	11.1

55

Table 9.1 : Bank Teller

MAJOR RESPONSIBILITIES	Importance			Training Needed			Will It Change		
	Major	Minor	Non-Applicable	High School	On-the-Job	Prior Experience	Yes	Uncertain	No
01. Observes safety procedures	90.0	0.0	10.0	40.0	60.0	0.0	10.0	30.0	60.0
02. Performs customer services	90.0	0.0	10.0	20.0	80.0	0.0	10.0	30.0	60.0
03. Handles coin and currency	80.0	20.0	0.0	60.0	40.0	0.0	0.0	40.0	60.0
04. Handles deposits	90.0	10.0	0.0	10.0	90.0	0.0	10.0	30.0	60.0
05. Cashes checks and redeems bonds	70.0	0.0	30.0	30.0	60.0	0.0	0.0	40.0	50.0
06. Handles savings withdrawals and accepts payments	100.0	0.0	0.0	10.0	90.0	0.0	0.0	40.0	60.0
07. Performs bookkeeping function	0.0	50.0	50.0	30.0	30.0	0.0	0.0	40.0	30.0
08. Performs maintenance duties	0.0	30.0	70.0	10.0	30.0	0.0	0.0	30.0	40.0

56

OCCUPATIONAL PREPARATION ANALYSIS CHART

Table 9.2 : Bank Teller

APTITUDES

verbal	90.0	clerical	40.0
numerical	90.0	mechanical	40.0
abstract	0.0	spelling	20.0
spatial	10.0	grammar	30.0

TEMPERMENT

varied duties, frequent change	80.0	repeated, set procedure	40.0
matching specified instructions	30.0	directing and planning for others	10.0
working with others	70.0	working alone and apart	20.0
influencing other people's ideas	30.0	risks, unexpected events, emergencies	30.0
interpreting personal feelings	20.0	analyzing facts and figures	20.0
making empirical judgements, decisions	30.0	precision, accuracy	50.0

INTERESTS

dealing with things and objects	20.0	science and technology	0.0
business contact with people	90.0	machines, procedures	70.0
routine, system	50.0	social welfare	20.0
communication of ideas	40.0	abstraction, creativity	0.0
prestige, esteem	10.0	tangible results	50.0

Table 9.3 : Bank Teller

Total Number of Questionnaires Filled Out - 10

1. Please estimate how many applicants are hired each year to fill vacancies.

0-3	10.0	8-10	20.0
3-5	20.0	greater than 10	30.0
6-8	10.0		

2. About how long do employees stay on this job?

less than one year	0.0
more than one year	90.0
no response	10.0

3. When an employee leaves this position, where do they generally go?

elsewhere	60.0
stay in company	20.0
no response	20.0

4. What is the expected change in the number of positions that will be available in the next six months to one year?

more	30.0
less	0.0
same	60.0
no response	10.0

Table 10.1 : General Sales Person

MAJOR RESPONSIBILITIES	Importance			Training Needed			Will It Change		
	Major	Minor	Non-Applicable	High School	On-the-Job	Prior Experience	Yes	Uncertain	No
01. Researches product and market	50.0	50.0	0.0	25.0	33.3	41.7	8.3	50.0	41.7
02. Plans call schedule	58.3	25.0	16.7	16.7	41.7	25.0	8.3	41.7	33.3
03. Maintains and handles promotional material	50.0	33.3	16.7	16.7	75.0	8.3	8.3	41.7	50.0
04. Performs customer service duties	58.3	25.0	8.3	25.0	50.0	16.7	8.3	41.7	41.7
05. Performs clerical duties	8.3	66.7	25.0	58.3	25.0	0.0	8.3	41.7	33.3
06. Performs other duties	33.3	41.7	8.3	0.0	75.0	0.0	8.3	33.3	33.3

OCCUPATIONAL PREPARATION ANALYSIS CHART

Table 10.2 : General Sales Person

APTITUDES

verbal	66.7	clerical	66.7
numerical	75.0	mechanical	16.7
abstract	8.3	spelling	66.7
spatial	8.3	grammar	66.7

TEMPERMENT

varied duties, frequent change	75.0	repeated, set procedure	25.0
matching specified instructions	58.3	directing and planning for others	25.0
working with others	50.0	working alone and apart	25.0
influencing other people's ideas	41.7	risks, unexpected events, emergencies	41.7
interpreting personal feelings	58.3	analyzing facts and figures	33.3
making empirical judgements, decisions	41.7	precision, accuracy	58.3

INTERESTS

dealing with things and objects	25.0	science and technology	0.0
business contact with people	75.0	machines, procedures	58.3
routine, system	25.0	social welfare	0.0
communication of ideas	50.0	abstraction, creativity	25.0
prestige, esteem	8.3	tangible results	50.0

Table 10.3 : General Sales Person

Total Number of Questionnaires Filled Out - 12

1. Please estimate how many applicants are hired each year to fill vacancies.

0-3	50.0
3-5	8.3
greater than 10	25.0

2. About how long do employees stay on this job?

more than one year	83.3
no response	16.7

3. When an employee leaves this position, where do they generally go?

elsewhere	50.0
stay in company	25.0
no response	25.0

4. What is the expected change in the number of positions that will be available in the next six months to one year?

less	8.3
same	75.0
no response	16.7

61

Table 11.1 : Real Estate Sales Person

MAJOR RESPONSIBILITIES	Importance			Training Needed			Will It Change		
	Major	Minor	Non-Applicable	High School	On-the-Job	Prior Experience	Yes	Uncertain	No
01. Manages office	40.0	30.0	30.0	60.0	40.0	0.0	0.0	100.0	0.0
02. Manages renting of apartments	50.0	20.0	30.0	40.0	50.0	10.0	0.0	90.0	10.0
03. Handles apartment maintenance	10.0	40.0	50.0	60.0	40.0	0.0	0.0	100.0	0.0
04. Handles evictions	20.0	30.0	50.0	40.0	50.0	10.0	0.0	90.0	10.0
05. Obtains rental listings	60.0	40.0	0.0	60.0	40.0	0.0	0.0	90.0	10.0
06. Handles acquisition and sale of income property	90.0	10.0	0.0	50.0	40.0	10.0	0.0	100.0	0.0

OCCUPATIONAL PREPARATION ANALYSIS CHART

Table 11.2 : Real Estate Sales Person

APTITUDES

verbal	20.0	clerical	10.0
numerical	20.0	mechanical	10.0
abstract	20.0	spelling	20.0
spatial	10.0	grammar	20.0

TEMPERAMENT

varied duties, frequent change	20.0	repeated, set procedure	20.0
matching specified instructions	20.0	directing and planning for others	20.0
working with others	20.0	working alone and apart	10.0
influencing other people's ideas	20.0	risks, unexpected events, emergencies	20.0
interpreting personal feelings	20.0	analyzing facts and figures	10.0
making empirical judgements, decisions	20.0	precision, accuracy	10.0

INTERESTS

dealing with things and objects	10.0	science and technology	10.0
business contact with people	20.0	machines, procedures	0.0
routine, system	20.0	social welfare	20.0
communication of ideas	20.0	abstraction, creativity	20.0
prestige, esteem	20.0	tangible results	20.0

Table 11.3 : Real Estate Sales Person

Total Number of Questionnaires Filled Out - 10

1. Please estimate how many applicants are hired each year to fill vacancies.

0-3	60.0
3-5	20.0
no response	20.0

2. About how long do employees stay on this job?

less than one year	40.0
more than one year	60.0

3. When an employee leaves this position, where do they generally go?

elsewhere	100.0

4. What is the expected change in the number of positions that will be available in the next six months to one year?

more	20.0
less	20.0
same	60.0

Part V

Statistical Information

The information which is presented in this section of the report represents cross - tabulations of the survey data. Eighty - six (86) businesses generated 263 Validation Instrument responses.

Title of Occupation by Town of Company

How to read the data:

17.1% of all secretarial occupations were surveyed in Wilmington

21.9% of all responses from Wilmington were in the secretarial occupation.

	Stoneham	Wilmington	Peabody	Woburn	Burlington	No. Reading	Reading	Lowell	Billerica
Secretary	0.0	17.1	2.4	7.3	17.1	0.0	0.0	9.8	4.9
	0.0	21.9	7.7	18.8	21.9	0.0	0.0	18.2	16.7
Bookkeeper	0.0	16.1	0.0	6.5	9.7	3.2	0.0	6.5	6.5
	0.0	15.6	0.0	12.5	9.4	12.5	0.0	9.1	16.7
Clerk Typist	4.2	10.4	8.3	6.3	12.5	0.0	0.0	8.3	4.2
	25.0	15.6	30.8	18.8	18.8	0.0	0.0	18.2	16.7
Legal Secretary	0.0	9.1	0.0	0.0	0.0	9.1	9.1	18.2	0.0
	0.0	3.1	0.0	0.0	0.0	12.5	25.0	9.1	0.0
Personnel Clerk	4.2	4.2	0.0	4.2	16.7	0.0	0.0	8.3	8.3
	12.5	3.1	0.0	6.3	12.5	0.0	0.0	9.1	16.7
Receptionist	4.4	13.3	6.7	6.7	15.6	2.2	0.0	6.7	4.4
	25.0	18.8	23.1	18.8	21.9	12.5	0.0	13.6	16.7
Sales Clerk	0.0	25.0	8.3	8.3	8.3	8.3	8.3	0.0	0.0
	0.0	9.4	7.7	6.3	3.1	12.5	25.0	0.0	0.0
Customer Service	0.0	16.7	0.0	11.1	11.1	5.6	0.0	16.7	11.1
	0.0	9.4	0.0	12.5	6.3	12.5	0.0	13.6	16.7
Bank Teller	10.0	0.0	10.0	0.0	10.0	10.0	0.0	0.0	0.0
	12.5	0.0	7.7	0.0	3.1	12.5	0.0	0.0	0.0
General Sales	16.7	8.3	0.0	8.3	8.3	8.3	0.0	16.7	0.0
	25.0	3.1	0.0	6.3	3.1	12.5	0.0	9.1	0.0
Real Estate	0.0	0.0	30.0	0.0	0.0	10.0	20.0	0.0	0.0
	0.0	0.0	23.1	0.0	0.0	12.5	50.0	0.0	0.0

Title of Occupation by Town of Company (cont.)

	Lynnfield	Tewksbury	Middleton	Wakefield	Lawrence	Andover	No. Andover	Haverhill
Secretary	2.4	2.4	0.0	2.4	9.8	19.5	2.4	2.4
	12.5	14.3	0.0	12.5	10.3	21.1	12.5	20.0
Bookkeeper	3.2	6.5	0.0	3.2	16.1	19.4	3.2	0.0
	12.5	28.6	0.0	12.5	12.8	15.8	12.5	0.0
Clerk Typist	2.1	4.2	2.1	2.1	18.8	12.5	2.1	2.1
	12.5	28.6	100.0	12.5	23.1	15.8	12.5	20.0
Legal Secretary	0.0	0.0	0.0	9.1	27.3	9.1	0.0	9.1
	0.0	0.0	0.0	12.5	7.7	2.6	0.0	20.0
Personnel Clerk	4.2	0.0	0.0	4.2	20.8	25.0	0.0	0.0
	12.5	0.0	0.0	12.5	12.8	15.8	0.0	0.0
Receptionist	2.2	2.2	0.0	2.2	13.3	15.6	2.2	2.2
	12.5	12.5	0.0	12.5	15.4	18.4	12.5	20.0
Sales Clerk	0.0	0.0	0.0	0.0	16.7	0.0	8.3	0.0
	0.0	0.0	0.0	0.0	5.1	0.0	12.5	0.0
Customer Service	5.6	5.6	0.0	0.0	11.1	5.6	5.6	0.0
	12.5	12.5	0.0	0.0	5.1	2.6	12.5	0.0
Bank Teller	0.0	0.0	0.0	20.0	20.0	10.0	0.0	10.0
	0.0	0.0	0.0	25.0	5.1	2.6	0.0	20.0
General Sales	8.3	0.0	0.0	0.0	0.0	8.3	8.3	0.0
	12.5	0.0	0.0	0.0	0.0	2.6	12.5	0.0
Real Estate	10.0	0.0	0.0	0.0	10.0	10.0	10.0	0.0
	12.5	0.0	0.0	0.0	2.6	2.6	12.5	0.0

Town of the Company by Industrial Classification

How to read the data:

87.5% of all occupations surveyed in Stoneham are characterized by Manufacturing which represents 4.5% of all occupations surveyed from the Manufacturing industry.

	Manufacturing	Wholesale-Retail Trade	Finance-Insurance	Services
Stoneham	87.5	0.0	12.5	0.0
	4.5	0.0	2.0	0.0
Wilmington	81.3	0.0	0.0	15.6
	16.9	0.0	0.0	12.5
Peabody	61.5	7.7	30.8	0.0
	5.2	8.3	8.2	0.0
Woburn	87.5	0.0	0.0	12.5
	9.1	0.0	0.0	5.0
Burlington	53.1	6.3	31.3	6.3
	11.0	16.7	20.4	5.0
No. Reading	0.0	50.0	37.5	12.5
	0.0	33.3	6.1	2.5
Reading	0.0	25.0	50.0	25.0
	0.0	8.3	4.1	2.5
Lowell	68.2	0.0	0.0	27.3
	9.7	0.0	0.0	15.0
Billerica	91.7	0.0	0.0	0.0
	7.1	0.0	0.0	0.0
Lynnfield	0.0	25.0	25.0	50.0
	0.0	16.7	4.1	10.0
Tewksbury	85.7	14.3	0.0	0.0
	3.9	8.3	0.0	0.0
Middleton	00.0	0.0	0.0	0.0
	0.6	0.0	0.0	0.0
Wakefield	0.0	0.0	87.5	12.5
	0.0	0.0	14.3	2.5
Haverhill	0.0	0.0	80.0	20.0
	0.0	0.0	8.2	2.5
Lawrence	66.7	0.0	25.6	7.7
	16.9	0.0	20.4	7.5
Andover	60.5	0.0	13.2	23.7
	14.9	0.0	10.2	22.5
No. Andover	0.0	0.0	12.5	62.5
	0.0	0.0	2.0	12.5

Title of Occupation by Industrial Classification

How to read the data:

63.4% of all secretaries surveyed were from the Manufacturing industry which represents 16.9% of all the Manufacturing firms who responded.

	Manufacturing	Wholesale-Retail Trade	Finance-Insurance	Services
Secretary	63.4	0.0	19.5	14.6
	16.9	0.0	16.3	15.0
Bookkeeper	71.0	6.5	9.7	9.7
	14.3	16.7	6.1	7.5
Clerk Typist	75.0	0.0	14.6	10.4
	23.4	0.0	14.3	12.5
Legal Secretary	27.3	0.0	0.0	63.6
	1.9	0.0	0.0	17.5
Personnel Clerk	62.5	0.0	20.8	12.5
	9.7	0.0	10.2	7.5
Receptionist	68.9	0.0	13.3	11.1
	20.1	0.0	12.2	12.5
Sales Clerk	50.0	41.7	0.0	8.7
	3.9	41.7	0.0	2.5
Customer Service	55.6	5.6	5.6	33.3
	6.5	8.3	2.0	15.0
Bank Teller	0.0	0.0	90.0	10.0
	0.0	0.0	18.4	2.5
General Sales	41.7	33.3	0.0	25.0
	3.2	33.3	0.0	7.5
Real Estate	0.0	0.0	100.0	0.0
	0.0	0.0	20.4	0.0

Title of Occupation by How Long Do Persons Stay in this Position

How to read the data:

87.8% of all secretarial responses indicated that secretaries stay on the job greater than a year. The secretarial occupation comprises 18% of all occupations surveyed indicating that the incumbent will stay on the job greater than one year.

	Less than one year	More than one year
Secretary	2.4 3.4	87.8 18.1
Bookkeeper	12.9 13.8	67.7 10.6
Clerk Typist	10.4 17.2	72.9 17.6
Legal Secretary	0.0 0.0	90.0 5.0
Personnel Clerk	4.2 3.4	83.3 10.1
Receptionist	15.6 24.1	75.6 17.1
Sales Clerk	33.3 13.8	33.3 2.0
Customer Service	11.1 6.9	77.8 7.0
Bank Teller	0.0 0.0	90.0 4.5
General Sales	0.0 0.0	83.3 5.0
Real Estate	40.0 13.8	60.0 3.0

Observation:

The firms surveyed for the most part pointed out that the majority of the personnel stay on the job greater than a year.

Title of Occupation by When People Leave This Position, Where Do They Go?

How to read the data:

34.1% of all secretarial responses infer that when a secretary leaves the position, he or she will remain in the company occupying another occupation.

The secretarial occupation encompasses 16.3% of all occupations surveyed who indicated that the employee will stay with the company in another capacity.

	Stay	Elsewhere
Secretary	34.1 16.3	46.3 15.3
Bookkeeper	35.5 12.8	35.5 8.9
Clerk Typist	39.6 22.1	41.7 16.1
Legal Secretary	18.2 2.3	72.7 6.5
Personnel Clerk	41.7 11.6	37.5 7.3
Receptionist	40.0 20.9	42.2 15.3
Sales Clerk	0.0 0.0	66.7 6.5
Customer Service	38.9 8.1	44.4 6.5
Bank Teller	20.0 2.3	60.0 4.8
General Sales	25.0 3.5	50.0 4.8
Real Estate	0.0 0.0	100.0 8.1

Observation:

A high percentage of employees staying in the company would indicate that there is considerable upward or lateral mobility for that occupation.

Title of Occupation by Changes Foreseen in the Number of Positions Available

How to read the data:

80.5% of all secretarial occupations surveyed indicate that there will be no change in the number of secretarial positions in the next six months to one year which represents 19.6% of all respondents who indicated there will be no change in the number of positions.

	More	Less	Unchanged
Secretary	9.8	0.0	80.5
	9.8	0.0	19.6
Bookkeeper	22.6	6.5	51.6
	17.1	11.1	9.5
Clerk Typist	22.9	4.2	56.3
	26.3	11.1	16.6
Legal Secretary	9.1	0.0	82.8
	2.4	0.0	5.4
Personnel Clerk	8.3	16.7	62.5
	4.9	22.2	8.9
Receptionist	8.9	8.9	73.3
	9.8	22.2	19.6
Sales Clerk	33.3	0.0	33.3
	9.8	0.0	2.4
Customer Service	16.7	16.7	55.6
	7.3	16.7	6.0
Bank Teller	30.0	0.0	60.0
	7.3	0.0	3.6
General Sales	0.0	8.3	75.0
	0.0	5.6	5.4
Real Estate	20.0	20.0	60.0
	4.9	11.1	3.6

Title of Occupation by How Many Persons are Hired Each Year to Fill Vacancies

How to read the data:

53.7% of all secretarial occupations surveyed indicate that between 0 and 3 persons are hired to fill vacancies each year. 14.5% of all responses indicating from 0 to 3 persons are hired to fill vacancies are in the occupation of secretary.

	0-3	3-5	6-8	8-10	GT 10
Secretary	53.7	14.6	4.9	0.0	17.1
	14.5	20.7	20.0	0.0	23.3
Bookkeeper	54.8	6.5	6.5	0.0	12.9
	11.2	6.9	20.0	0.0	13.3
Clerk Typist	42.7	18.8	6.3	0.0	18.8
	13.2	31.0	30.0	0.0	30.0
Legal Secretary	90.9	0.0	0.0	0.0	0.0
	6.6	0.0	0.0	0.0	0.0
Personnel Clerk	83.3	4.2	0.0	0.0	0.0
	13.2	3.4	0.0	0.0	0.0
Receptionist	84.4	4.4	0.0	0.0	0.0
	25.0	6.9	0.0	0.0	0.0
Sales Clerk	25.0	8.3	0.0	0.0	25.0
	2.0	3.4	0.0	0.0	10.0
Customer Service	38.9	22.2	11.1	5.6	5.6
	4.6	13.8	20.0	33.3	3.3
Bank Teller	20.0	10.0	10.0	20.0	30.0
	1.3	3.4	10.0	66.7	10.0
General Sales	50.0	8.3	0.0	0.0	25.0
	3.9	3.4	0.0	0.0	10.0
Real Estate	60.0	20.0	0.0	0.0	0.0
	3.9	6.9	0.0	0.0	0.0

Observation:

Among the eleven occupations surveyed, consensus was that between 0 and 3 persons were hired each year.

Changes Foreseen in the Number of Positions Available by Industrial Classification

How to read the data:

14.9% of all Manufacturing firms surveyed stated that there will be more positions available in the near future while 68.2% stated that there would be no change.

	Manufacturing	Wholesale-Retail Trade	Finance-Insurance	Services
More	14.9	25.0	18.4	15.0
Less	3.9	0.0	20.4	2.5
Unchanged	68.2	75.0	53.1	55.0

When People Leave this Position, Where Do They Go by Industrial Classification

How to read the data:

38.3% of all Manufacturing firms surveyed stated that employees stay within the firm in another capacity when leaving those occupations surveyed.

	Manufacturing	Wholesale-Retail Trade	Finance-Insurance	Services
Stay	38.3	8.3	34.7	17.5
Elsewhere	42.9	83.3	53.1	42.5

How Many Persons are Hired Each Year to Fill Vacancies by Industrial Classification.

How to read the data:

Of all businesses who hire from 0 to 3 persons each year to fill vacancies, 62.5% of the respondents were from Manufacturing which represents 61.7% of all Manufacturing respondents.

	Manufacturing	Wholesale-Retail Trade	Finance-Insurance	Services
0-3	62.5 61.7	3.9 50.0	17.7 53.1	11.8 45.0
3-5	51.7 9.7	3.4 8.3	17.2 10.2	24.1 17.5
6-8	50.0 3.2	0.0 0.0	30.0 6.1	20.0 5.0
8-10	0.0 0.0	0.0 0.0	66.7 4.1	33.3 2.5
GT 10	63.3 12.3	13.3 33.3	23.3 14.3	0.0 0.0

How Long do Persons Stay in this Position by Industrial Classification

How to read the data:

10.4% of the Manufacturing respondents indicated that their employees stayed less than one year.

	Manufacturing	Wholesale-Retail Trade	Finance-Insurance	Services
Less than one year	10.4	25.0	14.3	5.0
More than one year	76.6	75.0	77.6	67.5

Observation:

All industries indicated that a high percentage of employees in these occupations stay more than one year.

Part VI

"In House" Training Programs

During the survey interviews, businesses were acquainted with the North Reading High School offerings in Occupational Education. Briefly, the North Reading High School embodies a Work - Study Program, Distributive Education Program, as well as three unique pilot Cooperative Education Programs.

The first is a service - repair program sponsored by Volkswagon of America, Northeatern Distributorship, located in Wilmington. Selected students are extended the opportunity to train along side of presently employed Volkswagon, Porshe and Audi service repair technicians. Volkswagon of America in Wilmington has extended its facilities to these qualified youth as openings in the training schedule develop.

The second is a bank teller program sponsored by the Arlington Five Cent Savings Bank. Again, interested qualified students are extended the opportunity to develop the skills necessary to competently perform the occupation of a bank teller.

In the above mentioned programs, students were extended the opportunity to develop a saleable skill while still in high school. The young trainees are not employed by the establishments, and neither party is obligated to hire nor be hired. The purpose of these programs is to very simply provide saleable skill opportunities to interested students. Students must receive the written permission of their parents, teachers, and school administrator to become eligible for the program.

Training in these occupations is conducted during the day, (as in the instance of Volkswagon of America, 8:30 - 5:00 for 32 days, in the case of the

Bank Teller Program, 8:00 - 12:00 or 12:00 - 4:00 for 80 hours.)

The instruction period at Volkswagon of America was not consecutive days, but rather spread out over the school year. The Bank Teller Program's time line was from May 28 to July 1 with students alternating their training schedules from day to day.

The third program is in the area of Real Estate. Interested students arrived to school an hour before classes were scheduled to begin so that they could participate in a Real Estate Course. The purpose of the course was to provide the students with the necessary information and background to successfully attain their Real Estate Salesman's Licenses.

In all three instances, the establishments provided this service to the school system. Of course, it is to the firm's advantage to provide these training programs in terms of "all - ready trained potential employees." Yet, the students trained received instruction they would otherwise not have had. In other words, one hand washes the other. However, it should be pointed out that students did not " just go to work and learn by doing", but rather, a comprehensive curriculum was established utilizing performance standards. The student was aware at all time where he had been, where he is and where he is going. The curriculum was developed in cooperation with the high school by the individual firms.

It should be discussed here that it is not the intention of this report to initiate the actions of energetic school systems to contact Volkswagon of America or the Arlington Five Cent Savings Bank to place students in the existing programs. Rather, the purpose has been to demonstrate that there are responsible business establishments in this region who would be willing to cooperate with the various school systems.

Businesses surveyed were asked if they would be interested in a similar training situation being established in their firm. The majority of responses said they would. They collectively inferred, however, that they would prefer not

to be mentioned by name in this report, just yet. The inference was that they wanted time to organize themselves for the establishment of training programs. A feeling of evasion was not registered but rather positive indication of sincerity from the companies.

Part VII

Higbligbts

The research project entitled Regional Assessment and Participative Evaluation has identified eleven occupations for which there is an expected high degree of employability for qualified high school graduate.

For each occupation surveyed, the major and minor responsibilities have been defined as well as where the training needed should take place to competently perform these occupational responsibilities.

Those Aptitudes, Temperment and Interests necessary for job success have been brought forth.

This project has developed a methodology for researching the occupational community.

A listing of all firms within each community has been developed by size of the company, where it is located, number of employees and by SIC Coding.

Employment trends have been identified for each of the eleven occupations.

Business contacts have been made and communication channels established.

Businesses in the area want better qualified entry level employees and are willing to help develop these qualifications while the students are in high school.

The industrial community has been identified for the seventeen town region.

Project Regional Assessment and Participative Evaluation initiates the first educational collaborative in Occupational Education with in the region.

A detailed list of other entry level positions was also identified by the businesses surveyed. The list includes the following occupations:

Accounting Clerk
Account Payable Clerk
Accounts Receivable Clerk
Allocations Clerk
Assistant Bookkeeper
Assistant Employment Interviewer
Audit Clerk
Automotive Records Clerk
Billing Clerk
Cashier
Claims Adjustment Clerk
Customer Service Clerk
Delivery Tracing Clerk
Encoder
File Clerk
General Clerk
General Cost Accounting Clerk
Inventory Clerk
Key Punch Operators
Mail Clerk
Payroll Clerk
Product Control Clerk
Proof Operators
Raters
Reproducing Equipment Operators
Scheduling Clerk
Stock Clerk
Stenographer
Switchboard Operator
Technical Typist
Traffic Clerk

This report strongly urges that Education Agencies should:

Develop course content around the major and minor responsibilities cited for each occupation

Stress accuracy in typing business forms and letter as opposed to speed in "social" typing

Initiate transcription courses stressing business communications and grammar

Establish training programs within the Occupational Community utilizing the experience and expertise of the responsible industries

Implement Simulation Courses which reflect the atmosphere of Business and Industry

Contact local businesses and discover what they're all about and probe cooperative adventures

Perhaps the greatest insight experienced through this project is that businesses are ready, willing and able to provide expertise and assistance in the DEVELOPMENT OF EDUCATIONAL PROGRAMS THAT BENEFIT THE STUDENT.

Part VIII

Observations

This part of the report will disclose those personal observations during this project.

1. Personnel managers as well as incumbents were extremely courteous, helpful as well as interested in the Project.
2. Personnel offices for the most part were clean, bright, air-conditioned and pleasant. Exceptions to this observation were evident in the "older" manufacturing establishments.
3. Industrial comments concerning the luncheon to explain the Research Project were positive. Many businesses were excited in the fact that education was more than interested in them and were more than willing to help.
4. Those companies with the older facilities were located in Lawrence, Lowell, and Haverhill while the greatest number with newer facilities were found in Burlington, Woburn and Billerica.
5. Many of the Personnel Administrators interviewed did not know exactly what the specific responsibilities of each of the occupations surveyed were. Very few establishments had written job descriptions.
6. Of those companies who presently did not have published job descriptions, many were presently in process of compliling the job descriptions.
7. Those companies who already had published job descriptions were not too willing to relinquish them but many did.
8. There appeared to be a one to one ratio of male to female Personnel Managers.

9. For the most part, the female Personnel Managers were younger that the male managers.
10. These firms located in the southern section of the region appeared to be expanding their operation more so than in the northern section.
11. Many representatives of the various companies had attended several conferences concerning educational programs and expressed that there had been no follow - up. This they hoped would be corrected.
12. In a few instances, it was requested that the responses collected in the survey tools be examined by superiors before releasing them to us.
13. Many companies presently employ training personnel for established company-sponsored training programs.
14. Personnel administrators indicated that the majority of high school students do not know how to be interviewed. These same firms are willing to interview students and evaluate their performance in order to provide the opportunity for students to better their interviewing behavior.
15. Many businesses employed bi - lingual receptionists and secretaries to bridge the communication gaps.
16. All firms appear to engage in Affirmative Action Programs.
17. The Banking industry wants to immediately get involved with establishing cooperative training programs.
18. Shorthand is a skill much in demand by industry as a whole. It is also useful in being promoted to a higher grade in the firm.
19. Small legal offices will hire a young applicant with excellent typing and shorthand skills and train him or her to become a competent legal secretary.
20. Real Estate companies want young, personable, aggressive salesmen yet at the same time many state that clients appear to have more confidence in the older " more mature " salesman or broker.
21. Most companies surveyed pointed out that they would rather hire a high school graduate for clerical positions as opposed to graduates of

post-secondary education programs.

22. Most companies encourage employees to further their education through night courses while reimbursing the tuition costs. However, some companies stipulated that the courses would have to be job-related which raised the question of what "job-related" means. The flexibility between firms is such that some will pay only for those directly effecting their present or near future job duties while others feel that the product of any course will be a more energetic, aware and forward thinking employee.
23. Students with a working knowledge of accounting and bookkeeping are more employable.
24. For many companies, the position of secretary is not an entry level position.
25. Most companies prefer to promote from within and not employ immediate family relations.
26. Receptionists usually double as a switchboard operator with some typing.
27. Clerical positions are non - unionized, yet receive company raises when the union does.
28. There are more female secretaries employed than male, yet many large firms are looking to hire male secretaries or clerical workers. As it was explained by one personnel manager, the push it to promote females into managerial positions from within the clerical positions. If the males remain out of the clerical positions, then the large organizations will fear an unbalance of female administrators over male.
29. Many job titles varied from company to company, yet the job duties were comparative. This demonstrates a lack of job classification uniformity of occupational titles.
30. Accurate business typing skills are in a greater demand than "social" typing skills.
31. Turnover of the clerical workers is high due to the mobility of the young work force.

32. Steno - pools and clerk typist pools are the prime areas to be in if one wants to promoted to a secretarial position.

33. All positions require some On - the - Job training indicating that each company has its own modus operandi.

34. Most Education Agencies are becoming more willing to enter into cooperative programs among themselves and share their expertise. However, some are still very protective about entering into a collective action.

APPENDIX A

Personnel Agency Survey

Occupation	Staying Time				Training	
	3 months	3 months	1 year	1 year	on-the-job	elsewhere
Advertising Assistant		XX		X	XX	X
Sales Clerk	X	XX			XX	X
Market Research Assistant				XXX	XX	X
Display Person	XX	X			XX	X
Demonstrator	XXX				XXX	
Customer Service Specialist				XXX	XXX	
Bank Teller		XXX			XXX	
Stock Boy	XXX				XXX	
General Sales Person				XXX	XX	X
Bookkeeper		XX		X	X	XX
Real Estate Sales Person		X		XX		XXX
Cashier	XX	X			XXX	
General Clerk	X	XX			XXX	
Clerk-Typist		X		XX	XX	X
File Clerk		XXX			XX	X
Legal Secretary				XXX	X	XX
Personnel Clerk				XXX	XX	X
Payroll Clerk		X		XX	XX	
Receptionist		XXX			XX	X
Secretary				XXX	XX	X
Accounting Clerk		XX			X	XX
Stenographer				XXX	X	XX

Survey : Six Personnel Agencies

This survey indicates a variety of occupations.

APPENDIX A (cont.)

Personnel Agency Survey

The X's indicate the individual responses of the Personnel Agency Administrators. The Personnel Agencies were asked " How long do employees generally stay on the job ?" for each occupation and " What type of training is needed for these occupations ? " These responses were utilized in determining which occupations to concentrate on within the two Occupational Clusters.

APPENDIX B

Standard Industrial Classification Codes Two-Digit SIC

SIC CODE	
Agriculture, Forestry, and Fisheries	
01	Agricultural production
07	Agricultural services, hunting and trapping
08	Forestry
09	Fisheries
Mining:	
10	Metal mining
11	Anthracite mining
12	Bituminous coal and lignite mining
13	Crude petroleum and natural gas
14	Mining and quarrying of nonmetallic minerals, except fuels
Contract Construction	
15	Building construction-general contractors
16	Construction other than building construction-general contractors
17	Construction-special trade contractors
Manufacturing:	
19	Ordnance and accessories
20	Food and kindred products
21	Tobacco manufactures
22	Textile mill products
23	Apparel and other finished products made from fabrics and similar material
24	Lumber and wood products, except furniture
25	Furniture and fixtures
26	Paper and allied products
27	Printing, publishing and allied industries
28	Chemicals and allied products
29	Petroleum refining and related industries
30	Rubber and miscellaneous plastics products
31	Leather and leather products
32	Stone, clay, glass and concrete products
33	Primary metal industries
34	Fabricated metal products, except ordnance, machinery, and transportation equipment
35	Machinery, except electrical
Manufacturing (cont.)	
36	Electrical machinery, equipment and supplies
37	Transportation equipment
38	Professional, scientific, and controlling instruments; photographic and optical goods; watches and clocks
39	Miscellaneous manufacturing industries
Transportation, communication, electric, gas, and sanitary services:	
40	Railroad transportation
41	Local and suburban transit and interurban passenger transportation
[illegible]	Motor freight transportation and warehousing
[illegible]	Water transportation
[illegible]	Transportation by air
4[illegible]	Pipe line transportation
4[illegible]	Transportation services
48	Communication
49	Electric, gas and sanitary services
Wholesale and retail trade:	
50	Wholesale trade
52	Building materials, hardware, and farm equipment dealers
53	Retail trade-general merchandise
54	Food stores
55	Automotive dealers and gasoline
56	Apparel and accessory stores
57	Furniture, home furnishings and equipment stores
58	Eating and drinking places
59	Miscellaneous retail stores
Finance, insurance and real estate:	
60	Banking
61	Credit agencies other than banks
62	Security and commodity brokers, dealers, exchanges, and services
63	Insurance carriers
64	Insurance agents, brokers, and service
65	Real estate
66	Combination of real estate, insurance, loans, law office
67	Holding and other investments companies

APPENDIX B (cont.)

Standard Industrial Classification Codes Two-Digit SIC

SIC	
Services:	
70	Hotels, rooming houses, camps and other lodging places
72	Personal services
73	Miscellaneous business services
75	Automotive repair, automobile services, and garages
76	Miscellaneous repair services
78	Motion pictures
79	Amusement and recreation services except motion pictures
80	Medical and other health services
81	Legal services
82	Educational services
84	Museums, art galleries, botanical and zoological gardens
86	Nonprofit membership organizations
88	Private households
89	Miscellaneous services

APPENDIX C

	Number of Establishments	Total Employment	Contract Construction	Manufacturing	Transportation Communication Utilities	Wholesale Retail Trade	Finance, Insurance Real Estate	Services
Wakefield	522	8,034	537	2,641	142	1,558	1,829	1,307
Haverhill	914	11,522	459	4,242	537	3,476	470	2,292
Lawrence	1,426	27,924	879	14,687	521	5,873	1,457	4,506
Andover	383	9,548	420	6,298	118	986	612	1,071
No. Andover	212	12,540	207	9,446	284	1,007	54	1,622
Lowell	1,525	31,563	1,340	14,802	992	6,906	1,413	6,806
Billerica	313	5,152	451	2,139	172	1,613	58	709
Tewksbury	223	3,178	225	1,328	128	962	19	488
Lynnfield	135	1,540	109	35	14	1,054	16	286
Middleton	81	1,006	98	527	38	142	10	159
Peabody	770	10,918	576	4,316	198	4,087	359	1,368
Woburn	621	10,542	758	3,799	470	3,670	225	1,617
Burlington	481	15,415	916	4,518	107	4,311	226	5,247
No. Reading	131	1,497	177	80	70	880	13	267
Reading	311	3,194	347	1,014	91	938	90	690
Stoneham	322	5,481	168	784	57	2,917	66	1,462
Wilmington	237	8,498	281	3,127	148	1,949	64	2,649
Totals	8,607	167,702	7,948	73,777	4,087	42,329	6,981	31,826

APPENDIX D

	Total 17 Town Employment	Contract Construction	Manufacturing	Transportation Communication Utilities	Wholesale-Retail Trade	Finance, Insurance Real Estate	Services	Total Establishments
Wakefield	5	7	4	3	4	26	4	6.0
Haverhill	7	6	6	13	8	7	7	10.6
Lawrence	17	11	20	13	14	21	14	16.5
Andover	6	5	9	3	2	9	3	4.4
No. Andover	8	3	13	7	2	1	5	2.4
Lowell	19	17	20	24	16	20	19	17.7
Billerica	3	6	3	4	4	1	2	3.6
Tewksbury	2	3	2	3	2	0.3	2	2.5
Lynnfield	1	1	0.1	0.3	2	0.2	0.1	1.5
Middleton	1	1	1	1	0.3	0.1	0.1	1.0
Peabody	7	7	6	5	10	5	4	8.9
Woburn	6	10	5	11	9	3	5	7.2
Burlington	9	12	6	3	10	3	16	5.5
No. Reading	1	2	0.1	2	2	0.2	1	1.5
Reading	2	4	1	2	2	1	2	3.6
Stoneham	3	2	1	1	7	1	5	3.7
Wilmington	5	4	4	4	5	1	8	2.7
	100	4	43	2	25	4	18	

* Numbers represent percentages which indicate the Total Employment by Industrial Classification
* The Industrial Classifications of Agriculture and Mining have been deleted because they represent a very insignificant number employed within the region.

APPENDIX E

	Contract Construction	Manufacturing	Transportation Communication Utilities	Wholesale-Retail Trade	Finance, Insurance Real Estate	Services
Wakefield	6.6	32.8	1.7	19.3	22.7	16.2
Haverhill	3.9	36.8	4.6	30.0	4.0	19.8
Lawrence	3.1	52.5	1.8	21.0	5.2	16.1
Andover	4.3	65.9	1.2	10.3	6.4	11.2
No. Andover	1.6	74.7	2.2	7.9	0.4	12.8
Lowell	4.2	46.8	3.1	21.8	4.4	19.2
Billerica	8.7	41.5	3.3	31.3	1.1	13.7
Tewksbury	7.0	41.7	4.0	30.2	0.5	15.3
Lynnfield	7.0	2.2	0.9	68.4	1.0	18.5
Middleton	9.7	52.3	3.7	14.1	0.9	15.8
Peabody	5.2	39.5	1.8	37.4	3.2	12.5
Woburn	7.1	35.8	4.4	34.6	2.1	15.2
Burlington	5.9	29.3	0.6	27.9	1.4	34.0
No. Reading	11.8	5.3	4.6	58.7	0.8	17.8
Reading	10.8	31.7	2.8	29.3	2.8	21.6
Stoneham	3.0	14.3	1.0	53.2	1.2	26.6
Wilmington	3.3	36.7	1.7	22.9	0.7	31.1

*Note - The Industrial Classification of Agriculture and Mining have been deleted because they represent a very insignificant number employed with the region.

APPENDIX F

	Construction	Manufacturing	Transportation Communication Utilities	Wholesale-Retail Trade	Finance, Insurance, Real Estate	Services	Total
Wakefield	0	10	1	7	6	6	30
Haverhill	0	25	3	13	2	11	54
Lawrence	3	53	1	29	6	10	102
Andover	1	10	1	5	4	8	29
No. Andover	0	4	2	6	0	6	18
Lowell	2	59	5	22	8	17	113
Billerica	1	8	0	7	0	3	19
Tewksbury	0	5	0	4	0	2	11
Lynnfield	0	0	1	7	0	1	9
Middleton	0	2	0	0	0	0	2
Peabody	1	18	0	12	2	9	42
Woburn	5	20	2	20	1	5	53
Burlington	3	18	0	17	2	17	57
No. Reading	0	0	1	4	0	1	6
Reading	1	3	0	4	0	6	14
Stoneham	0	6	0	7	0	4	17
Wilmington	1	12	1	10	0	4	28
	18	253	18	174	31	110	604

* Industries Employing Fifty or more according to the Department of Employment Security
* The Industrial Classifications of Agriculture and Mining have been deleted because they represent a very insignificant number employed within the region.

APPENDIX G

Businesses Surveyed

American Mutual Insurance Company
Wakefield

Andover Personnel
Andover

Andover Service Center
Andover

Arlington Five Cent Savings Bank
North Reading

Arlington Trust
Methuen

Atlantic Gelatine
Woburn

Avco Research
Wilmington

Batal and Batal
Lawrence

Beckett Realty
Reading

Bedard and Michaud
Lawrence

Bernardin Realty
Andover

Bixby and Company
North Andover

Bjorkman and Lann Realty
Reading

Blax Industries
Woburn

Bolta Products
Lawrence

Bostik
Middleton

Castle Realty
Peabody

Charles River Breeding Labs
Wilmington

Craig Systems
Lawrence

Jason Cohen
Haverhill

Compugraphic
Wilmington

Control Data
Waltham

Converse Rubber Company
Wilmington

Corenco Corporation
Tewksbury

Raymond Couture
Reading

Curley and Flynn
Wakefield

DASA
Andover

Dynamic Research
Wilmington

Eagle - Tribune Publishing
North Andover

Eastman Gelatine
Peabody

Essex Broadway Savings Bank
Lawrence

Essex County Bank
Peabody

Filene's
Peabody

Gillette Toiletries
Andover

Goldman and Associates
Lowell

Gordon Realty
Peabody

Gould's Florists
Lynnfield

W. T. Grants
North Reading

APPENDIX G

Graph[illegible] Systems
Lowell

Gromko Olde County Realty
Peabody

Haverhill National Bank
Haverhill

Honeywell
Lawrence

Houghton Mifflin
Burlington

Hybrid Systems
Burlington

Inforex, Inc.
Burlington

ITT Semiconductors
Lawrence

Joan Fabrics
Lowell

Johns-Manville
Billerica

Frederick Keyes
North Reading

King's Department Store
Tewksbury

Lawrence Paperbound
Lawrence

Liberty Mutual
Burlington

Lincoln Foods
Lawrence

Lithographic Publishing
Stoneham

Lowell Gas
Lowell

Maintain, Inc.
Woburn

Malden Mills
Lawrence

Marshall's
Reading

Melrose - Wakefield Trust Company
Wakfield

Microwave Association
Burlington

Middlesex National Bank Association
Burlington

Modicon
Andover

N. E. Rehabilitation Center
Woburn

Northrup Realty
Lynnfield

Packett Research
Andover

Prudential Insurance Company
Lawrence

Raytheon
Lowell

Reardon and Caffrey
Lawrence

Reichold Chemicals
Andover

Sears and Roebuck Company
Burlington

Servomation
Stoneham

Richard Simmons
Lynnfield

Solid State Testing
Woburn

J. R. Sousa and Sons
Danvers

Stoneham Cooperative Bank
Stoneham

Sweetheart Plastics
Wilmington

APPENDIX G

Tryder Real Estate
North Reading

Tyler Rubber Company
Andover

United Parcel Service
Watertown

USCI
Billerica

Volkswagon of America
Wilmington

Wakefield Savings Bank
Wakefield

Walbar, Inc.
Peabody

Wang Laboratories
Tewksbury

Webtex Company
Peabody

Andrew Wilson Company
Lawrence

APPENDIX H

OCCUPATION DEFINITIONS

Sales Clerk ... Receives payment for merchandise, keeps shelves stocked, keeps record of sales, prepares inventory and/or orders merchandise

Customer Service Specialist ... Writes special orders for services or merchandise, performs personal services for customers of post exchange, prepares special order work sheets, keeps records of services in progress, notifies customer when service is completed and accepts payment

Bank Teller ... Performs transactions and security measures in accordance with established policy

Sales Person... Sells merchandise or services to business establishments or to individuals utilizing detailed knowledge of specific characteristics of the merchandise or service offered, calls on customers, demonstrates merchandise, prepares forms and sales contracts, may collect payment, may install

Real Estate Sales Person ... Rents, buys and sells property for clients on a commission basis, studies property listings, reviews trade journals, interviews prospective clients, draws up real estate contract and negogiates loans on property

Bookkeeper ... Keeps records of financial transactions of establishment, verifies and enters details of transactions as they occur, summarizes details on separate ledgers, may compute, type and mail monthly statements to customers

Clerk Typist ...Performs general clerical work requiring the use of typewriter, compiles and types records, bills and application forms, files records, posts information, distributes mail, answers telephone

Legal Secretary ...Prepares legal papers and correspondence of legal nature, such as summonses, complaint notices and subpoenas

Personnel Clerk ... Performs hiring duties, deals with newly hired employees, maintains employee records, administers health and insurance programs, maintains employee relations

Receptionist ... Receives visitors coming into establishment, ascertains their wants and directs them accordingly, may make future appointments and answer inquiries, may perform variety of other duties

Secretary ... Schedules appointments, gives information to callers, relieves officials of clerical work and minor administrative and business detail, reads and sorts incoming mail, takes dictation in shorthand

FOOTNOTES

1. *Educational Survey of the Region's Seventeen (17) Comprehensive High Schools.*

2. *Board of Education, The Commonwealth of Massachusetts,* Educational Goals for Massachusetts, *Bureau of Educational Information Services, December 1973, pp. 16, 17.*

3. *U.S. Department of Labor,* Tomorrow's Manpower Needs, *Vol. II, Bureau of Labor Statistics, February 1969, pp. 14-74, 93-96. U.S. Department of Labor,* The U.S. Economy in 1980, *Bureau of Labor Statistics, 1970, pp.26-36.*

4. *The Commonwealth of Massachusetts Division of Employment Security,* Manpower Requirements for Massachusetts by Occupation, by Industry 1970-1980, *Research and Information Service, April 1974.*

5. *The average commuting distance is measured by time. It is the assumption of this report that most employees are less likely to travel over 30 to 45 minutes to work each day, especially for entry level employment opportunities.*

6. *Massachusetts Division of Employment Security, 1972 Supplement to Massachusetts Cities and Towns Employment and Wages in Establishments Subject to the Massachusetts Employment Security Law by City and Town 1967-1971, March 1973.*

7. *IBID.*

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